

## WHAT IS CLAIMED IS:

1. A method of driving an AC plasma display panel, wherein said AC plasma display panel comprises:

5 an address electrode including  $t$  ( $t$ : integer of at least 2) strip portions;

t discharge cells belonging to said  $t$  strip portions respectively;

10 ~~5~~ a scan electrode including  $t$  strip portions belonging to said  $t$  discharge cells in one-to-one correspondence and arranged to grade-separately intersect with said strip portions of said address electrode;

15 a sustain electrode including  $t$  strip portions belonging to said  $t$  discharge cells in one-to-one correspondence and paired with said strip portions of said scan electrode;

10 and

20 a dielectric substance covering at least one of said scan electrode and said sustain electrode,

15 said method applying a prescribed voltage to said strip portions of said address electrode in common,

16 applying a prescribed voltage to each strip portions of said scan electrode, and

17 applying a first voltage to one of said  $t$  strip portions of said sustain electrode

20 18 belonging to a single discharge cell among said  $t$  discharge cells while applying a second

19 voltage to remaining all of said strip portions of said sustain electrode for forming desired

20 discharge only in said single discharge cell.

2. The method of driving an AC plasma display panel according to claim 1,

wherein

25 said  $t$  strip portions of said scan electrode form a single strip electrode.

3. The method of driving an AC plasma display panel according to claim 1,

wherein

*Step 10*  
a first potential difference between said strip portion of said sustain electrode supplied with said first voltage and said strip portion of said sustain electrode paired with said strip portion supplied with said first voltage is larger than a second potential difference between said strip portion of said sustain electrode supplied with said second voltage and said strip portion of said scan electrode paired with said strip portion supplied with said second voltage.

10 4. The method of driving an AC plasma display panel according to claim 3,  
setting said second potential difference substantially to zero.

15 5. The method of driving an AC plasma display panel according to claim 1,  
successively selecting one of said t strip portions of said sustain electrode and  
applying said first voltage while applying said second voltage to remaining all of said  
strip portions of said sustain electrode in a period when said prescribed voltage is applied  
to said scan electrode.

20 6. The method of driving an AC plasma display panel according to claim 1,  
wherein

25 said AC plasma display panel has a plurality of said scan electrodes and a  
plurality of said sustain electrodes respectively, *X*

*say 1 fig 2*  
said method, in a period for applying said first voltage to each one of said t  
strip portions of each of said plurality of sustain electrodes in common, successively  
selecting one of said strip portions of said scan electrodes paired with said strip portions

supplied with said first voltage and applying said prescribed voltage.  $\checkmark$   $\alpha \times$

7. The method of driving an AC plasma display panel according to claim 6, forming, after said period, first auxiliary discharge in said discharge cell to 5 which said strip portion of said sustain electrode supplied with said second voltage in said period belongs between strip portions of said scan electrode and said address electrode.

*See Art Cont.*

8. The method of driving an AC plasma display panel according to claim 6, forming, after said period, second auxiliary discharge in said discharge cell 10 selected and supplied with said first voltage for forming said desired discharge in said period between strip portions of said scan electrode and said sustain electrode.

9. An AC plasma display panel comprising:  
 an address electrode including  $t$  ( $t$ : integer of at least 2) strip portions;  
 15  $t$  discharge cells, having discharge gaps capable of forming desired discharge, belonging to said  $t$  strip portions respectively;  
 a scan electrode including of  $t$  strip portions belonging to said  $t$  discharge cells in one-to-one correspondence and arranged to grade-separately intersect with said strip portions of said address electrode;  
 20 a sustain electrode including  $t$  strip portions belonging to said  $t$  discharge cells in one-to-one correspondence and paired with said strip portions of said scan electrode;  
 a dielectric substance covering at least one of said scan electrode and said sustain electrode; and

25  $\boxed{a$  plurality of non-discharge cells, having non-discharge gaps harder to form discharge than said discharge gaps,  $}$  arranged on a same plane and belonging to said

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address electrode, wherein

5 said  $t$  discharge cells are arranged on said same plane and arranged adjacently to each other through at least one said non-discharge cell at least in a direction parallel to a display line,

10 said AC plasma display panel further comprising:

15 *See also Comp*  
a plurality of barrier ribs separating said non-discharge cells from said discharge cells or said non-discharge cells at least along a direction intersecting with said display line, wherein

20 at least two adjacent ones of said strip portions of said address electrode are integrated with each other extending over said non-discharge cells and said discharge or non-discharge cells separated by said barrier ribs.

10. A plasma display device comprising:

15 an AC plasma display panel; and

20 a driving unit for said AC plasma display panel, wherein

said AC plasma display panel comprises:

an address electrode including  $t$  ( $t$ : integer of at least 2) strip portions;

$t$  discharge cells belonging to said  $t$  strip portions respectively;

a scan electrode including  $t$  strip portions belonging to said  $t$  discharge cells in

25 one-to-one correspondence and arranged to grade-separately intersect with said strip portions of said address electrode belonging to said discharge cells;

a sustain electrode including  $t$  strip portions belonging to said  $t$  discharge cells in one-to-one correspondence and paired with said strip portions of said scan electrode; and

25 a dielectric substance covering at least one of said scan electrode and said

sustain electrode, and

5 said driving unit applies a prescribed voltage to said strip portions of said address electrode in common,

applies a prescribed voltage to each strip portions of said scan electrode, and

10 applies a first voltage to one of said t strip portions of said sustain electrode belonging to a single discharge cell among said t discharge cells while applying a second voltage to remaining all of said strip portions of said sustain electrode for forming desired discharge only in said single discharge cell.

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11. The plasma display device according to claim 10, wherein

15 said AC plasma display panel further comprises a plurality of non-discharge cells arranged on a same plane and belonging to said address electrode,

each said discharge cell has a discharge gap capable of forming desired discharge while each said non-discharge cell has a non-discharge gap harder to form discharge than said discharge gap,

20 said t discharge cells are arranged on said same plane and arranged adjacently to each other through at least one said non-discharge cell at least in a direction parallel to a display line,

25 said AC plasma display panel further comprises a plurality of barrier ribs

separating said non-discharge cells from said discharge cells or said non-discharge cells at least along a direction intersecting with said display line, and

30 at least two adjacent ones of said strip portions of said address electrode are integrated with each other extending over said non-discharge cells and said discharge or non-discharge cells separated by said barrier ribs.

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*See D  
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